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Possible West Nile Virus Transmission to an Infant Through Breast-Feeding — Michigan, 2002

CDC and the Michigan Department of Community Health (MDCH) continue to investigate West Nile Virus (WNV) infection in a woman, who received a blood product later found with evidence of WNV, and in her child, who was exposed to breast milk later found to be WNV positive by TaqMan® (*1*). This report updates the findings of this investigation.

On September 2, 2002, a woman aged 40 years delivered a healthy infant but required transfusion of two units of packed red blood cells (RBC) for anemia. The patient received the first unit 6 hours after delivery and the second on the following day. The second transfusion was derived from the same donation as a unit of platelets given to a liver transplant recipient who developed confirmed West Nile meningoencephalitis (WNME); the blood donor's original tubing segment from this common donation was WNV positive by TaqMan® (*1*). Approximately 2 hours after delivery, the patient developed a migraine headache, photophobia, and anomia. The patient had a history of migraine headaches. When she was discharged 2 days after delivery, her headache was resolving. Eight days later, the patient developed a severe, persistent headache that differed qualitatively from her migraine headache. Twelve days after delivery, the patient reported developing fever, and 3 days later she was admitted with a fever of 102.8º F (39.3º C) and peripheral white blood count (WBC) of 2,900/mm^3 (normal: 3,900–11,100/mm^3). Laboratory examination of the cerebrospinal fluid (CSF) revealed a WBC count of 134/mm^3 (normal: <10/mm^3) with 10% neutrophils, a protein concentration of 57 mg/dL (normal: 12–60 mg/dL), and a glucose concentration of 57 mg/dL (normal: 40–70 mg/dL). Computerized tomography of the head was normal. A CSF sample tested at MDCH was positive for WNV-specific IgM. The woman recovered from WNME and was discharged from the hospital.

On the day of delivery, the mother began breast-feeding her child and continued (i.e., 6 days after symptom onset) through the second day of the hospitalization for WNME. An undiluted sample of breast milk obtained 16 days after delivery tested positive for WNV by TaqMan® and for WNV-specific IgM and IgG antibody at CDC. Virus culture of this specimen is pending. Testing of a second sample of breast milk collected 24 days after the implicated transfusion was WNV RNA-negative by TaqMan® at MDCH and CDC. A 1:400 dilution of this sample was again WNV-specific IgM-positive at CDC. Although the infant has remained afebrile and healthy, a serum sample from the infant at age 25 days was WNV-specific IgM-positive in testing performed at MDCH and CDC. No cord blood or other products of conception were available for testing. The mother reported that the infant has had little outdoor or other exposure to mosquitoes.

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Editorial Note: Since WNV was first recognized in the United States in 1999, the infant in this report is the youngest person reported with WNV-specific IgM. Although clinically well, this child was born to a woman who developed WNME 9 days after receiving WNV-contaminated blood after delivery and was breast-fed for the first 17 days. IgM antibodies might be expressed in human milk at low concentrations, but passive transfer of IgM antibodies through breast milk is inefficient (*2*). As a result, the presence of measurable WNV-specific IgM in the infant suggests independent IgM production by the infant as a result of WNV infection.

Although WNV genetic material was present transiently in breast milk, the specific timing and source of the infant's infection remain unclear. Because neither WNV nor WNV-specific nucleic acids have been identified previously in human breast milk, the implications of this finding are unknown. In addition, maternal infection probably occurred when the mother received a transfusion during the immediate postpartum period, making it unlikely that infection occurred *in utero.* Because of the infant's minimal outdoor exposure, it is unlikely that infection was acquired from a mosquito. Therefore, breast milk must be considered as the most likely source of infection.

WNV illnesses in children aged <1 year appear to be infrequent. During 1999–2001, no cases were reported to CDC. In 2002, four infants with WNV illnesses have been reported (ages 2, 3, 9, and 11 months) to ArboNET (CDC, unpublished data, 2002). Retrospective investigations are under way to determine if these infants were potentially infected with WNV through breast-feeding. Laboratory investigations, including attempts to culture WNV from additional breast milk samples, are under way. Until live virus is cultured from breast milk, or until definitive data are obtained to document WNV transmission through breast milk, the findings described in this report should be interpreted with caution.

The infant described in this report remains healthy. Because the health benefits of breast-feeding are well established (*1*) and the risk for WNV transmission through breast-feeding is unknown, these findings do not suggest a change in breast-feeding recommendations.

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Update: Investigations of West Nile Virus Infections in Recipients of Organ Transplantation and Blood Transfusion — Michigan, 2002

On September 27, 2002, this report was posted on the MMWR *website* (http://www.cdc.gov/mmwr).

CDC, the Food and Drug Administration (FDA), the Health Resources and Services Administration (HRSA), and state and local health departments continue to investigate West Nile virus (WNV) infections in recipients of organ transplantation and blood transfusion. This report summarizes two investigations of Michigan recipients of blood products, one of whom also received a liver transplant (*1*). Both persons tested positive for WNV infection after receiving blood products derived from a single blood donation subsequently found to have evidence of WNV. These investigations provide further evidence that WNV is transmitted through blood transfusion.

On August 14, 2002, a man aged 47 years received a liver transplant and 24 units of blood products (9 units of fresh frozen plasma [FFP], 5 units of red blood cells [RBC], and 10 units of platelet concentrate [PC]). On August 20 and 21, he received 15 units of PC. After being discharged from the hospital on August 24, he was readmitted 10 days later with fever; he subsequently developed encephalopathy. A lumbar puncture revealed elevated protein, a lymphocytic pleocytosis, and WNV IgM antibody; the patient recovered and was discharged. Retention segments* were available for 20 donors; one retention segment was positive for WNV by kinetic quantitative PCR assay (TaqMan®), and the remaining 19 were negative.

On September 2, a woman aged 40 years delivered a healthy infant. The same day, she received one unit of RBC, and on September 3, she received another unit of RBC. She was discharged on September 4. She had intermittent nausea, malaise, and fever, and was readmitted to the hospital 13 days after discharge. On September 18, the patient had a fever of 102.8º F (39.3º C). A lumbar puncture revealed mildly elevated protein, a lymphocytic pleocytosis, and WNV IgM antibody. Blood center records indicated that the RBC unit transfused on September 3 was derived from the same donation subsequently found to be polymerase chain reaction-positive as the PC received by the liver transplant recipient on August 20. On the day of delivery, the patient began breast-feeding. A sample of breast milk obtained 16 days later tested positive for WNV by TaqMan® and for WNV-specific IgM antibody. The patient recovered and was discharged. The infant was breast-fed during September 2–19 and remains healthy.

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Editorial Note: This report describes two patients who tested positive for WNV infection after receipt of blood products from a single donation. The retention segment from the donation was positive for WNV by TaqMan®. Although it is possible that both persons became infected from mosquito bites, these findings indicate that the patients became infected through transfusion of blood products. An ongoing investigation in Mississippi isolated WNV in FFP. The retention segment from the donation from which this FFP was made was positive for WNV by TaqMan®, and the donor developed WNV-specific IgM antibody after donation. The ongoing investigation provides additional evidence that WNV can be transmitted through blood transfusion (*1*). Additional case investigations conducted by CDC, FDA, and health departments will help to define the risk for WNV transmission through blood transfusion and organ transplantation. Because of the risk for WNV transmission through blood transfusion, efforts to develop a blood screening test are under way.

WNV RNA has not been identified previously in breast milk, and no studies are known that define the implications of this laboratory finding. Laboratory investigations, including attempts to culture WNV from additional breast milk samples, are under way. Until live virus is cultured from breast milk, or until definitive data are obtained to document WNV transmission through breast milk, the TaqMan® findings described in this report should be interpreted with caution.

The risk for transmission of WNV from mother to infant through breast-feeding is unknown. The infant described in this report remains healthy despite breast-feeding for 17 days. Until follow-up testing on the infant is completed, it is unknown whether the infant was infected with WNV. The health benefits of breast-feeding are well established (*2*), and these findings do not suggest a change in breast-feeding recommendations.

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*Blood samples from tubing that had been attached to the original donor collection bag.

Update: Influenza Activity — United States and Worldwide, June–September, 2002

During June–September 2002, influenza A (H3N2) and B viruses circulated worldwide and were associated with mild to moderate levels of disease activity. Influenza B viruses predominated in Africa, and both influenza A (H3N2) and B viruses circulated widely in Asia, Oceania, and Latin America, except in Chile and Taiwan, where A (H1)* viruses predominated. In North America, sporadic isolates of influenza A (H3N2), A (H1), and B viruses were identified. This report summarizes influenza activity in the United States and worldwide during June–September 2002†. Influenza activity in North America typically peaks during December–March, which underscores the need to begin vaccinating against influenza in October and to continue vaccination into December and throughout the influenza season (*1*).

United States

Influenza surveillance is conducted by a network comprising four components, including approximately 700 sentinel providers and approximately 120 U.S. World Health Organization (WHO) and National Respiratory and Enteric Virus Surveillance System (NREVSS) collaborating laboratories (*2*). During previous influenza seasons, active surveillance was conducted only from October to mid-May. In 2002, approximately 120 sentinel providers and approximately 60 U.S. WHO and NREVSS collaborating laboratories continued to submit weekly reports after mid-May. During May 19–September 21, the weekly percentage of patient visits to sentinel providers for influenza-like illness ranged from 1.0% in mid-May to 0.5% in mid-September. During this period, WHO and NREVSS collaborating laboratories tested 10,370 respiratory specimens for influenza viruses, of which 145 (1.4%) were positive. Of the positive results, 138 (95.2%) were influenza B viruses and seven (4.8%) were influenza A viruses. Influenza viruses were reported each week from mid-May through mid-July and during the weeks ending July 27 and August 31. No influenza viruses have been reported for September.

From mid-May through early June, outbreaks of influenza B viruses were reported in schools in Hawaii, Oregon, and Texas. In mid-August, a cluster of five influenza A (H3N2) cases associated with a cruise and land tour in Alaska and the Yukon was reported by Health Canada. Ongoing surveillance conducted by the tour company detected no increase in respiratory illness (*3*).

Worldwide

During June–September, influenza A (H3N2) and B viruses circulated widely in Asia and Oceania; influenza A (H1) viruses were identified infrequently and were not associated with widespread activity, except in Taiwan, where they predominated. In Africa, influenza B viruses predominated. However, Madagascar reported an outbreak of influenza A (H3N2) viruses associated with elevated morbidity and mortality (*4*). In Latin America, influenza A (H3N2) and B viruses circulated widely and were associated with outbreaks. Influenza A (H1) viruses were identified less frequently, except in Chile, where they predominated. Influenza B viruses predominated in Argentina and were associated with an outbreak in August among school-aged children and their contacts. Influenza A (H3N2) and B viruses circulated widely in Brazil and Peru. In Canada, an outbreak in a long-term–care facility in August was associated with influenza A (H3N2) viruses; influenza A (H3N2), A (H1), and B viruses were identified sporadically throughout the summer.

Characterization of Influenza Virus Isolates

WHO's Collaborating Center for Surveillance, Epidemiology, and Control of Influenza at CDC analyzes influenza virus isolates from laboratories worldwide. Of 23 influenza A (H1) viruses that were collected worldwide during June–September and characterized antigenically at CDC, all were similar to A/New Caledonia/20/99, the H1N1 component of the 2002–03 influenza vaccine; 21 isolates were from Latin America, one was from Asia, and one was from Oceania. Of the 42 influenza A (H3N2) viruses that were characterized antigenically, all were similar to A/Panama/2007/99, the H3N2 component of the 2002–03 influenza vaccine; 21 were from Latin America, 13 were from Oceania, seven were from Asia, and one was from the United States.

Influenza B viruses circulating worldwide can be divided into two antigenically distinct lineages represented by B/Yamagata/16/88 and B/Victoria/2/87. Viruses of the B/Yamagata lineage have circulated worldwide since 1990. From late 1991 to early 2001, no viruses of the B/Victoria lineage were identified outside Asia. Since March 2001, B/Victoria-lineage viruses have been identified in many countries, including the United States. The B component of the 2002–03 influenza vaccine belongs to the B/Victoria

* Includes both the A (H1N1) and A (H1N2) influenza virus subtypes. The influenza A (H1N2) strain appears to have resulted from the reassortment of the genes of currently circulating influenza A (H1N1) and A (H3N2) subtypes. Because the hemagglutinin proteins of the A (H1N2) viruses are similar to those of currently circulating A (H1N1) viruses and the neuraminidase proteins are similar to currently circulating A (H3N2) viruses, the 2002–03 influenza vaccine should provide protection against A (H1N2) viruses.

† Data reported as of September 27, 2002.

lineage. Of the 96 influenza B isolates that were collected worldwide during June–September and characterized antigenically at CDC, 93 belonged to the B/Victoria lineage and three belonged to the B/Yamagata lineage. All 93 B/Victoria-lineage viruses were similar to B/Hong Kong/330/01, the B component of the 2002–03 influenza vaccine. Of the 93 B/Victoria-lineage viruses, 65 were from Latin America, 13 were from Asia, eight were from the United States, and seven were from Oceania. Of the three B/Yamagata-lineage viruses, two were from Latin America and one was from Asia.

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Editorial Note: During June–September 2002, influenza A (H1), A (H3N2), and B viruses circulated worldwide. In North America, sporadic cases of influenza were identified each month. The identification of influenza isolates and sporadic influenza outbreaks in the summer and fall is not unusual. Although the number of influenza viruses reported to CDC this summer is greater than the number reported in the previous 12 summers, this increase probably reflects the institution of systematic reporting rather than a true increase in summer influenza activity.

Although the influenza virus type/subtype that will predominate and the onset, peak, and severity of influenza-related disease activity for the 2002–03 influenza season cannot be predicted, the optimal time to receive influenza vaccine is October–November. Persons at high risk for influenza-related complications (e.g., persons aged ≥65 years and persons aged 6 months–64 years with certain medical conditions), healthcare workers, household members of persons at high risk, and children aged 6 months to <9 years receiving influenza vaccine for the first time are recommended to receive vaccine beginning in October (*1*). Because children aged 6–23 months are at increased risk for influenza-related hospitalizations, starting this fall, the Advisory Committee on Immunization Practices is encouraging, when feasible, the vaccination of all children aged 6–23 months and their household contacts and out-of-home caretakers beginning in October (*1,5,6*). Other healthy persons, including those aged 50–64 years, are recommended to begin receiving vaccine in November. Influenza vaccine should continue to be offered to all unvaccinated persons in December and throughout the influenza season, as long as vaccine supplies are available (*1*).

The three manufacturers distributing influenza vaccine in the United States are expected to produce approximately 94 million doses combined, the largest number of trivalent influenza vaccine doses ever projected for a single season. Vaccine manufacturers estimate that approximately 80% of the 94 million doses of influenza vaccine will be distributed by the end of October.

Each February, WHO recommends influenza virus strains for inclusion in the following season's Northern Hemisphere influenza vaccine (*7*). In the United States, the Food and Drug Administration's Vaccines and Related Biological Products Advisory Committee selects vaccine strains to be used by vaccine manufacturers that distribute influenza vaccine in the United States. Substitution of an antigenically equivalent virus with better growth or processing properties for one or more of the WHO-recommended vaccine components occurs frequently. For the 2002–03 influenza season, WHO recommended A/New Caledonia/20/99–like (H1N1), A/Moscow/10/99-like (H3N2), and B/Hong Kong/330/01–like viruses for inclusion in the Northern Hemisphere influenza vaccine (*7*). Influenza vaccines sold in the United States will use A/New Caledonia/20/99 for the H1N1 component and the antigenically equivalent strains of A/Panama/2007/99 (H3N2) for the A/Moscow/10/99-like strain and B/Hong Kong/330/01 or B/Hong Kong/1434/02 for the B/Hong Kong/330/01–like strain.

Influenza surveillance reports for the United States are published weekly during October–May and are available through CDC's voice (telephone, 888-232-3228) and fax (telephone, 888-232-3299, document number 361100) information systems and at http://www.cdc.gov/ncidod/diseases/flu/weekly.htm. The first surveillance report for the 2002–03 season will be available October 11, 2002. Additional information about influenza viruses and influenza surveillance is available at http://www.cdc.gov/ncidod/diseases/flu/fluvirus.htm, and additional information on influenza vaccine is available at http://www.cdc.gov/nip/flu/default.htm.

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This report is based on data contributed by Health Canada, Ottawa, Canada. T Ayers, MS, Hawaii Dept of Health, Honolulu. A Markum, Klamath County Dept of Public Health, Klamath Falls, Oregon. N Pascoe, Texas Dept of Health, Austin. WHO collaborating laboratories. National Respiratory and Enteric Virus Surveillance System laboratories. U.S. Influenza Sentinel Provider Surveillance System. WHO National Influenza Centers, Communicable Diseases, Surveillance and Response, Geneva, Switzerland. A Hay, PhD, WHO Collaborating Center for Reference and Research on Influenza, National Institute for Medical Research, London, England. I Gust, MD, A Hampson, WHO Collaborating Center for Reference and Research on Influenza, Parkville, Australia. M Tashiro, MD, WHO Collaborating Center for Reference and Research on Influenza, National Institute of Infectious Diseases, Tokyo, Japan.

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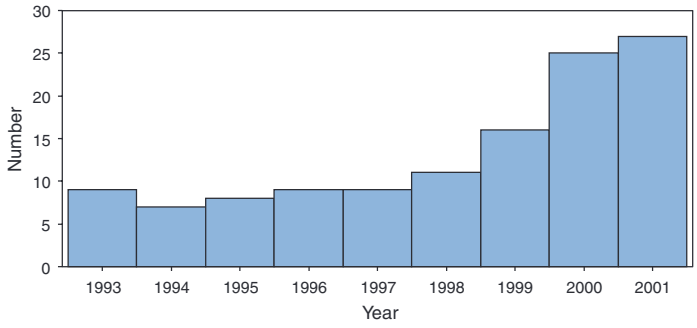
Increase in African Immigrants and Refugees with Tuberculosis — Seattle-King County, Washington, 1998–2001

The proportion of tuberculosis (TB) cases among foreign-born persons in the United States has increased steadily, accounting for half of reported cases in 2001 for which country-of-origin information was available. During 1998–2001, the annual number of TB cases among African immigrants and refugees in Seattle and all of King County increased approximately threefold to that during 1993–1997. This report summarizes the investigation of cases during 1998–2001 and outlines the public health interventions implemented to prevent TB in this population. The findings indicate that in Seattle-King County, persons at risk for TB who have arrived recently in the United States were primarily from the African-Horn countries of Eritrea, Ethiopia, and Somalia. Primary health-care providers and civil surgeons (i.e., physicians appointed by the Immigration and Naturalization Service to screen for medical conditions as required for changes of immigration status) should be aware of the high TB rate among African immigrants, especially within the first 5 years after immigration, and be alert for severe extrapulmonary forms of TB.

TB surveillance data are derived from case reports submitted to and verified by the Seattle-King County Public Health (SKCPH) TB Control Program. During 1993–1997, fewer than 10 cases of TB in African immigrants were reported each year (5%–10% of the annual total). The number of cases began increasing in 1998 (Figure). In 2001, of 139 TB cases reported in Seattle-King County, 28 (20%) were among African immigrants.

FIGURE. Number of tuberculosis cases in immigrants and refugees from African countries, by year — Seattle-King County, Washington, 1993–2001



During 1998–2001, of Seattle-King County's 486 TB cases, 79 (16%) were among African immigrants, 67 (85%) of whom were from Eritrea, Ethiopia, and Somalia. Two each were from Kenya, Uganda, and Zambia, and one each was from six other African countries (Gambia, Guinea, Liberia, Malawi, Rwanda, and Zaire). Of 281 other foreign-born patients with TB reported during the same period, 68 were from Vietnam, 59 were from the Philippines, 24 were from India, and the remainder were from 69 other countries.

Characteristics of patients and of TB disease were similar for the 67 African-Horn immigrants and the 12 immigrants from other African countries; 40 (51%) cases were among men. Of 69 patients who were tested for human immunodeficiency virus infection, five (7%) tested positive.

The median age of the 79 African immigrants with TB was 27 years (range: 2–70 years); five (6%) patients were aged <15 years, and 62 (78%) were aged <35 years, compared with 117 (40%) of 281 other foreign-born patients aged <35 years with TB reported during the same period ($p<0.01$). For African immigrants, TB occurred sooner after immigration than for other immigrants. Of 71 cases in African immigrants with known arrival dates, 32 (45%) occurred within 1 year after arrival, and 60 (65%) occurred within 5 years, compared with 38 (16%) and 98 (41%), respectively, of 239 TB cases among other immigrants ($p<0.01$).

Among African immigrants with TB reported during 1998–2001, a total of 37 (47%) had pulmonary disease, 39 (49%) had extrapulmonary disease, and three (4%) had both, resulting in a total of 42 (53%) patients with extrapulmonary disease. This proportion was greater than the national average of 27% reported in 2000 (*1*) but similar to the 127 (45%) of 281 immigrants from other continents ($p=0.21$). Among the 42 African immigrants with extrapulmonary TB, eight (19%) had TB of the spine (i.e., Pott's disease), compared with nine

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(7%) of 127 extrapulmonary TB cases in the other foreign-born patients (p=0.04).

Of the 72 initial isolates of *Mycobacterium tuberculosis* from African immigrants with TB, four (6%) were resistant to isoniazid but not to rifampin, and one was resistant to isoniazid, rifampin, ethambutol, pyrazinamide, and streptomycin. Of 258 initial isolates from other immigrants, 27 (10%) were resistant to isoniazid but not rifampin, and two were resistant to both isoniazid and rifampin.

In the SKCPH Refugee Screening Program, the number of refugees arriving from Eritrea, Ethiopia, and Somalia into Seattle-King County increased from 59 in 1998 to 425 in 2001. An estimated 10,314 (range: 3,952–16,676) residents of Seattle-King County were born in Africa (*2*). On the basis of this denominator, the annual rate of TB for African immigrants was 262 per 100,000 population in 2001. For all of Seattle-King County, the 2001 TB rate was eight.

Medical records for the 27 African immigrants reported with TB in 1998 and 1999 were reviewed for missed opportunities to prevent TB. Among 25 immigrants with complete records, 10 (40%) had received tuberculin skin testing before developing TB. Six of these patients had positive results and started isoniazid treatment for latent TB infection (LTBI); two reportedly completed treatment. Five (20%) other patients had not been tested for LTBI, although they had received primary health-care services before their diagnosis of TB. The remaining 10 (40%) were not known to have received medical care in the United States before their diagnosis of TB.

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Editorial Note: The findings in this report indicate that in Seattle-King County, the immigrant groups at risk for TB were primarily from the African-Horn countries of Eritrea, Ethiopia, and Somalia. The World Health Organization estimates that the TB rate is 260 per 100,000 population for Ethiopia and 229 for all of Africa (*3*), rates almost identical to those observed in Seattle-King County. Increases in African immigration and TB are occurring elsewhere; in the United States, the number of refugees from Africa increased from 6,662 in 1998 to an estimated 18,979 in 2001 (*4,5*).

State and local health departments should monitor TB surveillance trends to focus case-finding and prevention activities. Seattle-King County implemented a flexible community-based approach that establishes partnerships with immigrant service systems, engages groups of immigrants in an exchange of TB information, and employs immigrants to serve as outreach workers in their communities (*6*). For example, the SKCPH TB Control Program and the International Medicine Clinic at Harborview Medical Center, Seattle, implemented a pilot program hiring and training recent refugees from three countries (Somalia, the former Soviet Union, and the former Yugoslavia) to work as outreach workers for TB-prevention services targeted to refugees. These workers visit patients who are undergoing treatment for LTBI or TB and serve as mediators between patients and their health-care providers. The workers also assist with other resettlement issues (e.g., social needs, education, and overall health care). Since the program was implemented in 1999, the rate of TB treatment acceptance among targeted refugees increased from 51% (46 of 90) in 1998 to 86% (224 of 260) in 2000, and the rate of treatment completion increased from 50% (23 of 46) to 87% (194 of 224) (*6*).

Primary health-care providers and civil surgeons (*7,8*), should be aware of the high TB rate among African immigrants, especially within the first 5 years after immigration, and be alert for severe extrapulmonary forms of TB (e.g., Pott's disease). Immigrants, including refugees, from countries with high rates of TB (*3*) should be screened for active TB and tested for LTBI when they enter the health-care system. Candidates for treatment of LTBI should be selected and treated in accordance with guidelines from the American Thoracic Society and CDC (*9*).

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West Nile Virus Activity — United States, September 26–October 2, 2002, and Investigations of West Nile Virus Infections in Recipients of Blood Transfusion and Organ Transplantation

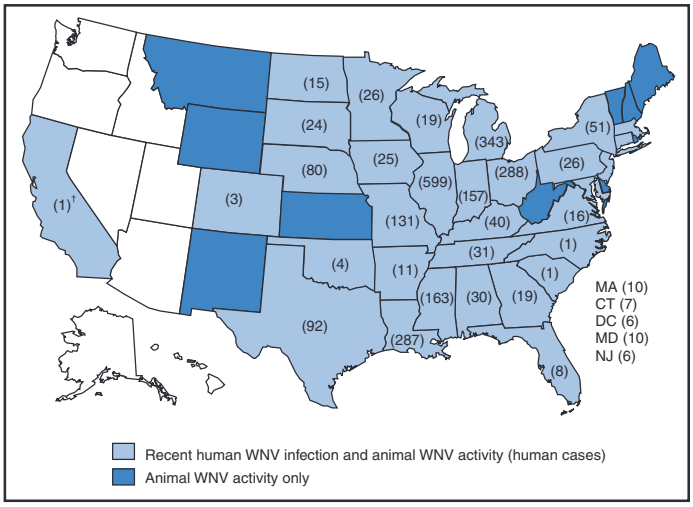
This report summarizes West Nile virus (WNV) surveillance data reported to CDC through ArboNET and by states and other jurisdictions as of 7 a.m. Mountain Daylight Time, October 2, 2002, and updates preliminary demographic and clinical information on cases of WNV infections in recipients of blood transfusion and organ transplantation reported to CDC during August 28–October 2, 2002.

WNV Surveillance

During the reporting period of September 26–October 2, a total of 409 laboratory-positive human cases of WNV-associated illness were reported from Illinois (n=81), Michigan (n=73), Ohio (n=56), Indiana (n=53), Nebraska (n=32), Louisiana (n=26), Missouri (n=17), Kentucky (n=13), Pennsylvania (n=eight), Iowa (n=seven), Minnesota (n=seven), Mississippi (n=six), Alabama (n=five), New York (n=five), Tennessee (n=five), Wisconsin (n=five), Maryland (n=four), Colorado (n=two), New Jersey (n=two), South Dakota (n=one), and Texas (n=one). During the same period, WNV infections were reported in 684 dead crows and 441 other dead birds. A total of 1,027 veterinary cases were reported (1,026 equine and one other species). During the same period, 521 WNV-positive mosquito pools were reported.

During 2002, a total of 2,530 human cases with laboratory evidence of recent WNV infection have been reported from Illinois (n=599), Michigan (n=343), Ohio (n=288), Louisiana (n=287), Mississippi (n=163), Indiana (n=157), Missouri (n=131), Texas (n=92), Nebraska (n=80), New York (n=51), Kentucky (n=40), Tennessee (n=31), Alabama (n=30), Minnesota (n=26), Pennsylvania (n=26), Iowa (n=25), South Dakota (n=24), Georgia (n=19), Wisconsin (n=19), Virginia (n=16), North Dakota (n=15), Arkansas (n=11), Maryland (n=10), Massachusetts (n=10), Florida (n=eight), Connecticut (n=seven), the District of Columbia (n=six), New Jersey (n=six), Oklahoma (n=four), Colorado (n=three), California (n=one), North Carolina (n=one), and South Carolina (n=one) (Figure). Among the 2,132 patients for whom data were available, the median age was 56 years (range: 1 month–99 years); 1,150 (54%) were male, and the dates of illness onset ranged from June 10 to September 23. A total of 116 human deaths have been reported. The median age of decedents was 79 years (range: 27–99 years); 70 (60%) deaths were among men. In addition, 5,633 dead crows and 4,216 other dead birds with WNV infection were reported from 42 states, New York City, and the District of Columbia; 4,377 WNV infections in mammals (4,369 equines, three canines, and five other species) have been reported from 33 states (Alabama, Arkansas, Colorado, Delaware, Florida, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maryland, Massachusetts, Minnesota, Mississippi, Missouri, Montana, Nebraska, New Jersey, New Mexico, New York, North Dakota, Ohio, Oklahoma, Pennsylvania, South Carolina, South Dakota, Tennessee, Texas, Vermont, Virginia, and Wyoming). During 2002, WNV seroconversions have been reported in 310 sentinel chicken flocks from Florida, Iowa, Nebraska, Pennsylvania, and New York City; 3,874 WNV-positive mosquito pools have been reported from 26 states (Alabama, Arkansas, Connecticut, Delaware, Georgia, Illinois, Indiana, Iowa, Kentucky, Maryland, Massachusetts, Mississippi, Missouri, Nebraska, New Hampshire, New Jersey, New York, North Carolina, Ohio, Pennsylvania, Rhode Island, South Carolina, South Dakota, Texas, Vermont, and Virginia), New York City, and the District of Columbia.

FIGURE. Areas reporting West Nile virus (WNV) activity — United States, 2002*



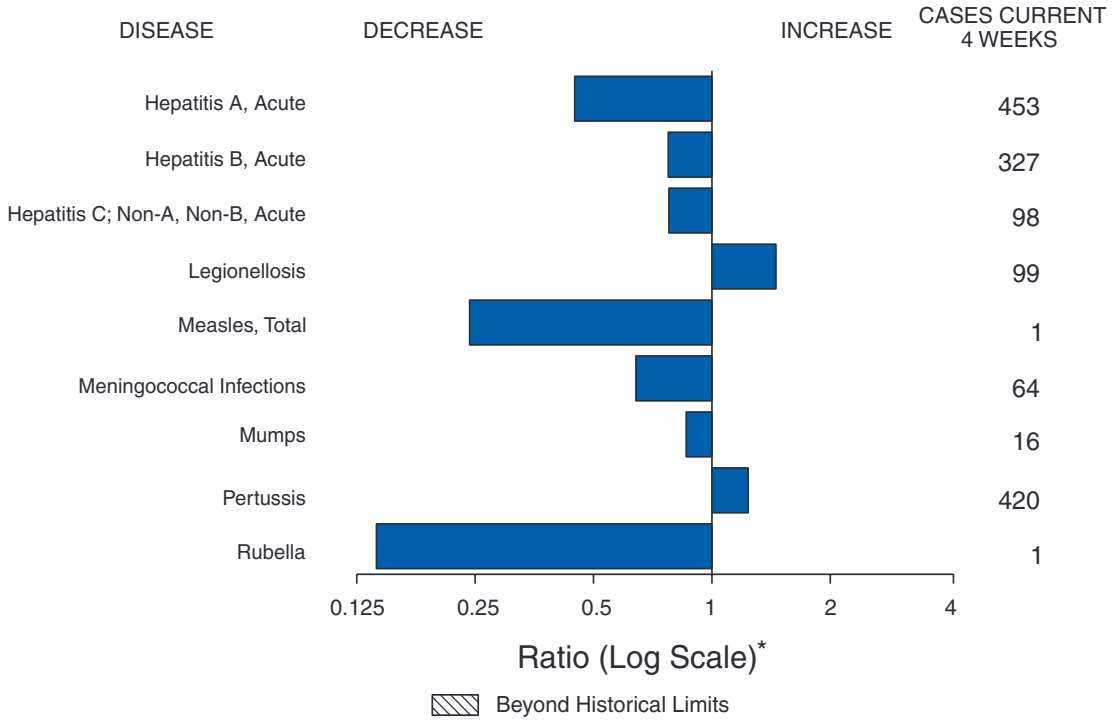
* As of 7 a.m. Mountain Daylight Time, October 2, 2002.
† California has reported human WNV activity only.

WNV Infections in Recipients of Blood Transfusion and Organ Transplantation

CDC, the Food and Drug Administration, and the Health Resources and Services Administration, in collaboration with blood collection agencies and state and local health departments, continue to investigate WNV infections in recipients

(*Continued on page 895*)

FIGURE I. Selected notifiable disease reports, United States, comparison of provisional 4-week totals ending September 28, 2002, with historical data



* Ratio of current 4-week total to mean of 15 4-week totals (from previous, comparable, and subsequent 4-week periods for the past 5 years). The point where the hatched area begins is based on the mean and two standard deviations of these 4-week totals.

TABLE I. Summary of provisional cases of selected notifiable diseases, United States, cumulative, week ending September 28, 2002 (39th Week)*

		Cum. 2002	Cum. 2001		Cum. 2002	Cum. 2001
Anthrax		2	3	Encephalitis: West Nile†	731	41
Botulism:	foodborne	11	33	Hansen disease (leprosy)†	57	50
	infant	42	71	Hantavirus pulmonary syndrome†	11	6
	other (wound & unspecified)	17	13	Hemolytic uremic syndrome, postdiarrheal†	149	124
Brucellosis†		59	98	HIV infection, pediatric†§	116	147
Chancroid		53	28	Plague	-	2
Cholera		4	4	Poliomyelitis, paralytic	-	-
Cyclosporiasis†		157	119	Psittacosis†	17	10
Diphtheria		1	2	Q fever†	30	21
Ehrlichiosis:	human granulocytic (HGE)†	237	183	Rabies, human	2	1
	human monocytic (HME)†	117	91	Streptococcal toxic-shock syndrome†	62	60
	other and unspecified	6	5	Tetanus	18	26
Encephalitis:	California serogroup viral†	74	72	Toxic-shock syndrome	86	90
	eastern equine†	2	6	Trichinosis	12	18
	Powassan†	-	-	Tularemia†	47	109
	St. Louis†	-	73	Yellow fever	1	-
	western equine†	-	-			

-:No reported cases.
* Incidence data for reporting year 2001 and 2002 are provisional and cumulative (year-to-date).
† Not notifiable in all states.
§ Updated monthly from reports to the Division of HIV/AIDS Prevention — Surveillance and Epidemiology, National Center for HIV, STD, and TB Prevention (NCHSTP). Last update July 28, 2002.

TABLE II. Provisional cases of selected notifiable diseases, United States, weeks ending September 28, 2002, and September 29, 2001 (39th Week)*

Reporting Area	AIDS		Chlamydia†		Cryptosporidiosis		*Escherichia coli, Enterohemorrhagic*			
							O157:H7		Shiga Toxin Positive, Serogroup non-O157	
	Cum. 2002§	Cum. 2001	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001
UNITED STATES	24,713	30,610	563,666	574,535	1,813	2,939	2,541	2,364	123	105
NEW ENGLAND	1,011	1,116	19,899	18,001	131	119	198	206	29	33
Maine	23	36	1,229	1,010	9	14	26	24	5	1
N.H.	20	27	1,177	1,032	25	10	25	27	-	3
Vt.	8	13	661	456	26	30	6	13	1	1
Mass.	519	595	8,158	7,685	42	46	92	103	9	9
R.I.	71	76	2,044	2,206	16	3	12	10	-	-
Conn.	370	369	6,630	5,612	13	16	37	29	14	19
MID. ATLANTIC	5,619	7,965	65,061	62,255	218	254	172	174	-	-
Upstate N.Y.	404	1,079	12,487	9,976	86	77	133	115	-	-
N.Y. City	3,210	4,361	21,233	22,306	86	98	10	15	-	-
N.J.	925	1,345	9,533	10,461	8	13	29	44	-	-
Pa.	1,080	1,180	21,808	19,512	38	66	N	N	-	-
E.N. CENTRAL	2,494	2,223	95,527	105,466	426	1,371	634	604	13	6
Ohio	453	424	22,269	27,263	98	137	117	132	11	4
Ind.	347	264	11,863	11,615	31	67	43	67	-	-
Ill.	1,170	989	25,941	31,992	54	461	134	150	-	-
Mich.	398	411	23,840	22,321	82	142	106	76	2	2
Wis.	126	135	11,614	12,275	161	564	234	179	-	-
W.N. CENTRAL	421	636	31,713	29,439	311	390	388	380	26	28
Minn.	90	105	6,959	6,106	167	120	138	145	22	25
Iowa	54	73	4,057	3,704	37	72	96	69	-	-
Mo.	189	302	11,252	10,429	29	38	49	50	N	N
N. Dak.	1	2	682	757	6	9	3	13	-	1
S. Dak.	3	22	1,516	1,335	17	6	31	33	1	1
Nebr.	43	61	2,362	2,491	43	143	44	53	3	1
Kans.	41	71	4,885	4,617	12	2	27	17	-	-
S. ATLANTIC	7,537	9,405	107,457	111,224	250	284	222	185	35	20
Del.	131	202	1,966	2,115	2	5	7	4	-	1
Md.	1,066	1,494	11,986	11,218	16	32	19	26	-	-
D.C.	371	639	2,472	2,439	4	11	-	-	-	-
Va.	538	763	11,154	13,802	10	19	44	46	8	2
W. Va.	58	59	1,811	1,765	2	2	6	9	-	-
N.C.	555	699	18,486	16,659	28	23	36	36	-	-
S.C.	547	565	8,601	11,818	6	6	4	12	-	-
Ga.	1,160	1,027	21,703	23,783	116	121	51	27	10	9
Fla.	3,111	3,957	29,278	27,625	66	65	55	25	17	8
E.S. CENTRAL	1,128	1,401	35,173	37,225	100	40	84	113	-	-
Ky.	173	278	6,358	6,751	4	4	25	59	-	-
Tenn.	483	438	12,065	11,058	50	12	35	31	-	-
Ala.	197	347	9,258	10,231	40	12	17	15	-	-
Miss.	275	338	7,492	9,185	6	12	7	8	-	-
W.S. CENTRAL	2,696	3,087	78,808	80,364	29	105	54	156	-	-
Ark.	163	156	4,998	5,636	7	6	9	11	-	-
La.	693	652	14,595	13,686	5	7	2	7	-	-
Okla.	133	187	8,284	7,889	12	11	18	24	-	-
Tex.	1,707	2,092	50,931	53,153	5	81	25	114	-	-
MOUNTAIN	790	1,068	34,916	34,347	128	168	277	225	15	12
Mont.	8	14	1,616	1,451	4	25	25	16	-	-
Idaho	18	17	1,838	1,411	24	19	37	49	7	2
Wyo.	6	3	693	605	9	4	12	7	1	1
Colo.	157	244	10,432	9,787	45	36	78	79	3	6
N. Mex.	53	107	4,613	4,619	18	20	6	11	3	3
Ariz.	327	417	11,106	10,876	12	6	32	21	1	-
Utah	43	87	1,982	1,786	12	53	64	28	-	-
Nev.	178	179	2,636	3,812	4	5	23	14	-	-
PACIFIC	3,017	3,709	95,112	96,214	220	208	512	321	5	6
Wash.	302	385	10,607	10,195	37	U	123	87	-	-
Oreg.	216	154	5,032	5,474	30	39	177	53	5	6
Calif.	2,416	3,098	73,709	75,570	152	165	170	161	-	-
Alaska	17	17	2,635	1,990	-	1	6	4	-	-
Hawaii	66	55	3,129	2,985	1	3	36	16	-	-
Guam	2	9	-	304	-	-	N	N	-	-
P.R.	668	932	1,790	1,944	-	-	-	2	-	-
V.I.	66	2	125	121	-	-	-	-	-	-
Amer. Samoa	U	U	U	U	U	U	U	U	U	U
C.N.M.I.	2	U	138	U	-	U	-	U	-	U

N: Not notifiable. U: Unavailable. -: No reported cases. C.N.M.I.: Commonwealth of Northern Mariana Islands.

* Incidence data for reporting year 2001 and 2002 are provisional and cumulative (year-to-date).

† Chlamydia refers to genital infections caused by *C. trachomatis*.

§ Updated monthly from reports to the Division of HIV/AIDS Prevention — Surveillance and Epidemiology, National Center for HIV, STD, and TB Prevention. Last update July 28, 2002.

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending September 28, 2002, and September 29, 2001 (39th Week)*

Reporting Area	*Escherichia coli Enterohemorrhagic* Shiga Toxin Positive, Not Serogrouped		Giardiasis	Gonorrhea		*Haemophilus influenzae*, Invasive All Ages, All Serotypes		*Haemophilus influenzae*, Invasive Age <5 Years Serotype B	
	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001
UNITED STATES	29	11	11,908	238,646	265,365	1,147	1,119	16	20
NEW ENGLAND	-	1	1,238	5,586	5,054	81	81	-	1
Maine	-	-	157	99	106	1	1	-	-
N.H.	-	-	31	95	135	7	4	-	-
Vt.	-	1	96	78	51	6	3	-	-
Mass.	-	-	618	2,467	2,358	42	39	-	1
R.I.	-	-	119	647	605	10	3	-	-
Conn.	-	-	217	2,200	1,799	15	31	-	-
MID. ATLANTIC	-	1	2,505	29,908	30,695	204	165	3	3
Upstate N.Y.	-	-	874	6,445	6,056	92	56	2	-
N.Y. City	-	-	929	8,687	9,387	46	42	-	-
N.J.	-	-	223	5,527	5,448	45	38	-	-
Pa.	-	1	479	9,249	9,804	21	29	1	3
E.N. CENTRAL	11	5	2,163	46,271	55,485	174	204	3	2
Ohio	10	5	680	12,338	15,165	64	53	-	1
Ind.	-	-	-	5,092	5,014	35	40	1	-
Ill.	-	-	468	13,881	17,794	57	71	-	-
Mich.	1	-	654	10,767	12,980	11	12	2	-
Wis.	-	-	361	4,193	4,532	7	28	-	1
W.N. CENTRAL	-	2	1,463	12,399	12,570	50	55	1	1
Minn.	-	-	574	2,104	1,952	36	30	1	-
Iowa	-	-	234	932	981	1	-	-	-
Mo.	N	N	353	6,439	6,449	10	16	-	-
N. Dak.	-	2	11	37	35	-	6	-	-
S. Dak.	-	-	48	179	218	-	-	-	-
Nebr.	-	-	122	711	901	-	2	-	1
Kans.	-	-	121	1,997	2,034	3	1	-	-
S. ATLANTIC	-	-	2,157	61,644	69,067	299	279	2	1
Del.	-	-	38	1,191	1,258	-	-	-	-
Md.	-	-	93	6,424	6,701	68	70	2	-
D.C.	-	-	31	2,043	2,188	-	-	-	-
Va.	-	-	204	6,798	8,075	26	21	-	-
W. Va.	-	-	44	725	496	14	14	-	1
N.C.	-	-	-	12,117	12,975	30	41	-	-
S.C.	-	-	103	5,199	8,449	10	4	-	-
Ga.	-	-	678	11,963	13,121	77	71	-	-
Fla.	-	-	966	15,184	15,804	74	58	-	-
E.S. CENTRAL	7	1	281	20,244	24,012	49	62	1	-
Ky.	7	1	-	2,691	2,646	4	2	-	-
Tenn.	-	-	127	7,004	7,438	26	32	-	-
Ala.	-	-	154	6,043	7,945	14	26	1	-
Miss.	-	-	-	4,506	5,983	5	2	-	-
W.S. CENTRAL	-	-	172	35,181	39,511	47	41	2	1
Ark.	-	-	121	2,936	3,448	2	-	-	-
La.	-	-	3	9,041	9,450	4	6	-	-
Okla.	-	-	48	3,541	3,594	36	34	-	-
Tex.	-	-	-	19,663	23,019	5	1	2	1
MOUNTAIN	11	1	1,196	7,408	7,856	138	122	2	7
Mont.	-	-	72	70	83	-	-	-	-
Idaho	-	-	89	67	60	2	1	-	-
Wyo.	-	-	22	44	59	1	1	-	-
Colo.	11	1	392	2,573	2,371	26	34	-	-
N. Mex.	-	-	126	927	761	21	19	-	1
Ariz.	-	-	153	2,729	2,971	64	50	1	4
Utah	-	-	237	198	137	15	6	-	-
Nev.	-	-	105	800	1,414	9	11	1	2
PACIFIC	-	-	733	20,005	21,115	105	110	2	4
Wash.	-	-	280	2,104	2,257	2	2	1	-
Oreg.	-	-	311	636	854	51	32	-	-
Calif.	-	-	-	16,342	17,225	22	49	1	4
Alaska	-	-	73	430	311	1	6	-	-
Hawaii	-	-	69	493	468	29	21	-	-
Guam	-	-	-	-	34	-	-	-	-
P.R.	-	-	26	265	442	1	1	-	-
V.I.	-	-	-	31	21	-	-	-	-
Amer. Samoa	U	U	U	U	U	U	U	U	U
C.N.M.I.	-	U	1	13	U	-	U	-	U

N: Not notifiable. U: Unavailable. - : No reported cases.
* Incidence data for reporting year 2001 and 2002 are provisional and cumulative (year-to-date).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending September 28, 2002, and September 29, 2001 (39th Week)*

Reporting Area	*Haemophilus influenzae*, Invasive, Age <5 Years, Non-Serotype B		*Haemophilus influenzae*, Invasive, Age <5 Years, Unknown Serotype		Hepatitis (Viral, Acute), By Type, A		Hepatitis (Viral, Acute), By Type, B		Hepatitis (Viral, Acute), By Type, C; Non-A, Non-B	
	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001
UNITED STATES	188	182	14	24	6,282	7,432	5,022	5,362	11,908	3,044
NEW ENGLAND	8	13	-	-	236	488	191	101	20	30
Maine	-	-	-	-	8	10	8	5	-	-
N.H.	-	1	-	-	11	11	15	11	-	-
Vt.	-	-	-	-	1	10	4	5	12	6
Mass.	5	7	-	-	104	225	107	21	8	24
R.I.	-	-	-	-	30	38	21	22	-	-
Conn.	3	5	-	-	82	194	36	37	-	-
MID. ATLANTIC	25	24	-	3	709	950	1,015	1,020	1,176	991
Upstate N.Y.	10	7	-	1	144	187	104	91	53	21
N.Y. City	7	6	-	-	297	339	492	479	-	-
N.J.	5	4	-	-	89	231	247	219	1,098	920
Pa.	3	7	-	2	179	193	172	231	25	50
E.N. CENTRAL	27	32	1	2	820	927	622	715	76	135
Ohio	7	9	1	-	266	179	80	85	6	8
Ind.	7	6	-	1	38	77	38	38	-	1
Ill.	11	11	-	-	211	350	101	116	11	9
Mich.	1	-	-	1	181	259	403	444	59	117
Wis.	1	6	-	-	124	62	-	32	-	-
W.N. CENTRAL	3	2	3	6	251	298	166	161	664	901
Minn.	3	1	1	2	36	32	20	17	-	8
Iowa	-	-	-	-	66	29	12	18	1	-
Mo.	-	-	2	4	70	68	89	91	649	881
N. Dak.	-	1	-	-	1	2	4	-	-	-
S. Dak.	-	-	-	-	3	2	1	1	1	-
Nebr.	-	-	-	-	17	30	22	23	9	5
Kans.	-	-	-	-	58	135	18	11	4	7
S. ATLANTIC	46	40	1	6	1,916	1,629	1,291	1,080	140	68
Del.	-	-	-	-	9	13	7	21	5	6
Md.	3	7	-	1	236	182	92	107	6	6
D.C.	-	-	-	-	65	43	16	11	-	-
Va.	4	5	-	-	96	104	154	127	9	-
W. Va.	1	1	1	1	15	14	18	20	2	9
N.C.	3	2	-	4	182	157	175	161	22	16
S.C.	2	1	-	-	54	63	80	26	4	6
Ga.	17	16	-	-	382	737	338	313	29	-
Fla.	16	8	-	-	877	316	411	294	63	25
E.S. CENTRAL	10	12	1	3	197	314	263	363	158	169
Ky.	1	-	-	1	41	113	43	45	3	8
Tenn.	6	6	-	1	82	110	102	178	24	56
Ala.	3	5	1	1	29	68	54	73	4	3
Miss.	-	1	-	-	45	23	64	67	127	102
W.S. CENTRAL	12	5	-	-	407	702	399	605	9,532	599
Ark.	1	-	-	-	31	60	68	73	5	6
La.	2	-	-	-	30	77	45	96	25	126
Okla.	7	5	-	-	39	97	42	81	5	4
Tex.	2	-	-	-	307	468	244	355	9,497	463
MOUNTAIN	34	20	7	1	458	580	480	369	54	44
Mont.	-	-	-	-	12	10	7	3	-	1
Idaho	1	-	-	-	24	49	6	10	-	2
Wyo.	-	-	-	-	2	7	15	2	5	5
Colo.	2	2	-	-	68	73	61	80	17	6
N. Mex.	6	8	1	1	18	32	122	105	1	11
Ariz.	16	8	5	-	247	293	185	113	4	9
Utah	5	2	-	-	50	59	41	19	4	3
Nev.	4	-	1	-	37	57	43	37	23	7
PACIFIC	23	34	1	3	1,288	1,544	595	948	88	107
Wash.	1	1	-	1	132	105	53	110	17	17
Oreg.	5	5	-	-	54	88	96	126	15	13
Calif.	13	26	1	1	1,092	1,321	437	687	56	77
Alaska	1	1	-	-	8	14	3	9	-	-
Hawaii	3	1	-	1	2	16	6	16	-	-
Guam	-	-	-	-	-	1	-	-	-	-
P.R.	-	1	-	-	84	160	73	203	-	1
V.I.	-	-	-	-	-	-	-	-	-	-
Amer. Samoa	U	U	U	U	U	U	U	U	U	U
C.N.M.I.	-	U	-	U	-	U	37	U	-	U

N: Not notifiable. U: Unavailable. -: No reported cases.
* Incidence data for reporting year 2001 and 2002 are provisional and cumulative (year-to-date).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending September 28, 2002, and September 29, 2001 (39th Week)*

Reporting Area	Legionellosis		Listeriosis		Lyme Disease		Malaria		Measles Total	
	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001
UNITED STATES	734	780	383	442	10,308	11,698	901	1,168	23†	103§
NEW ENGLAND	65	48	44	40	2,868	3,470	48	75	-	5
Maine	2	6	5	-	53	-	5	4	-	-
N.H.	4	7	4	4	181	64	7	2	-	-
Vt.	27	5	3	2	24	14	2	1	-	1
Mass.	23	15	20	20	934	1,000	15	39	-	3
R.I.	1	6	1	1	252	393	5	7	-	-
Conn.	8	9	11	13	1,424	1,999	14	22	-	1
MID. ATLANTIC	182	176	102	76	6,011	6,235	189	348	7	18
Upstate N.Y.	63	48	43	22	3,728	2,453	32	51	1	4
N.Y. City	29	28	23	18	101	61	118	206	6	6
N.J.	18	20	15	15	457	1,866	20	53	-	1
Pa.	72	80	21	21	1,725	1,855	19	38	-	7
E.N. CENTRAL	188	217	41	68	66	658	103	145	3	10
Ohio	85	92	16	12	49	33	17	21	1	3
Ind.	15	15	6	5	17	20	9	15	2	4
Ill.	-	22	1	21	-	29	24	59	-	3
Mich.	65	51	14	21	-	5	42	32	-	-
Wis.	23	37	4	9	U	571	11	18	-	-
W.N. CENTRAL	38	43	12	12	187	314	50	31	3	4
Minn.	10	9	2	-	111	254	16	6	1	2
Iowa	9	8	1	2	31	26	4	5	-	-
Mo.	8	17	6	6	34	28	14	12	2	2
N. Dak.	-	1	1	-	-	-	1	-	-	-
S. Dak.	2	3	-	-	1	-	-	-	-	-
Nebr.	9	4	1	1	5	4	5	2	-	-
Kans.	-	1	1	3	5	2	10	6	-	-
S. ATLANTIC	145	135	60	54	997	804	276	242	2	5
Del.	7	6	-	2	129	141	2	2	-	-
Md.	27	29	14	10	532	490	89	100	-	3
D.C.	5	7	-	-	18	8	17	13	-	-
Va.	17	19	4	9	123	104	23	43	-	1
W. Va.	N	N	-	5	12	10	3	1	-	-
N.C.	9	7	5	2	101	33	19	12	-	-
S.C.	5	10	8	4	13	5	7	6	-	-
Ga.	11	10	10	11	2	-	59	39	-	1
Fla.	64	47	19	11	67	13	57	26	2	-
E.S. CENTRAL	25	52	13	18	35	51	19	33	-	2
Ky.	9	12	2	6	19	19	7	13	-	2
Tenn.	10	24	7	7	16	17	3	11	-	-
Ala.	6	12	4	5	-	8	4	5	-	-
Miss.	-	4	-	-	-	7	5	4	-	-
W.S. CENTRAL	8	19	12	30	17	70	14	72	2	1
Ark.	-	-	-	1	2	-	2	3	-	-
La.	1	6	-	-	2	5	4	5	-	-
Okla.	3	3	7	2	-	-	8	2	-	-
Tex.	4	10	5	27	13	65	-	62	2	1
MOUNTAIN	33	39	25	31	17	9	37	44	2	2
Mont.	3	-	-	-	-	-	1	2	-	-
Idaho	1	2	2	1	3	4	-	3	1	1
Wyo.	1	2	-	1	1	1	-	-	-	-
Colo.	6	12	6	9	3	-	20	21	-	-
N. Mex.	2	2	2	6	1	-	2	3	-	-
Ariz.	8	13	11	6	2	-	6	6	-	1
Utah	9	5	3	2	6	1	5	3	-	-
Nev.	3	3	1	6	1	3	3	6	1	-
PACIFIC	50	51	74	113	110	87	165	178	4	56
Wash.	5	7	8	7	9	7	15	6	-	15
Oreg.	N	N	8	9	13	9	8	13	-	2
Calif.	45	39	50	91	85	69	134	147	3	32
Alaska	-	1	-	-	3	2	2	1	-	-
Hawaii	-	4	8	6	N	N	6	11	1	7
Guam	-	-	-	-	-	-	-	-	-	-
P.R.	-	2	1	-	N	N	-	5	-	1
V.I.	-	-	-	-	-	-	-	-	-	-
Amer. Samoa	U	U	U	U	U	U	U	U	U	U
C.N.M.I.	-	U	-	U	-	U	-	U	-	U

N: Not notifiable. U: Unavailable. -: No reported cases.
* Incidence data for reporting year 2001 and 2002 are provisional and cumulative (year-to-date).
† Of 23 cases reported, 11 were indigenous and 12 were imported from another country.
§ Of 103 cases reported, 51 were indigenous and 52 were imported from another country.

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending September 28, 2002, and September 29, 2001 (39th Week)*

Reporting Area	Meningococcal Disease		Mumps		Pertussis		Rabies, Animal	
	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001
UNITED STATES	1,302	1,806	202	180	5,498	3,947	4,539	5,487
NEW ENGLAND	79	83	6	1	467	341	708	572
Maine	7	3	-	-	12	5	45	52
N.H.	11	11	4	-	10	15	40	19
Vt.	4	5	-	-	91	27	81	54
Mass.	39	46	1	1	317	272	222	208
R.I.	5	3	-	-	13	5	59	51
Conn.	13	15	1	-	24	17	261	188
MID. ATLANTIC	126	190	20	21	294	257	834	1,007
Upstate N.Y.	37	50	3	3	214	114	525	620
N.Y. City	21	32	1	11	10	45	10	26
N.J.	24	32	-	2	3	13	133	156
Pa.	44	76	16	5	67	85	166	205
E.N. CENTRAL	171	275	25	22	666	639	130	127
Ohio	64	75	8	1	338	246	31	42
Ind.	25	31	2	1	91	63	30	2
Ill.	36	67	7	16	101	68	28	24
Mich.	34	60	7	2	41	98	41	42
Wis.	12	42	1	2	95	164	-	17
W.N. CENTRAL	118	118	15	7	524	194	307	302
Minn.	29	16	3	3	239	70	36	39
Iowa	17	23	1	-	127	18	62	69
Mo.	39	43	5	-	102	80	41	37
N. Dak.	-	5	1	-	-	-	12	33
S. Dak.	2	5	-	-	5	3	47	42
Nebr.	25	12	-	1	6	4	-	4
Kans.	6	14	5	3	45	19	109	78
S. ATLANTIC	231	284	23	30	337	196	1,869	1,890
Del.	7	3	-	-	2	-	24	30
Md.	7	37	5	4	51	33	199	385
D.C.	-	-	-	-	1	1	-	-
Va.	33	33	3	6	117	35	397	349
W. Va.	4	12	-	-	30	2	144	115
N.C.	29	59	1	4	36	56	557	450
S.C.	22	29	2	3	36	31	100	89
Ga.	29	41	4	8	18	20	284	325
Fla.	100	70	8	5	46	18	164	147
E.S. CENTRAL	75	116	12	7	189	124	123	185
Ky.	11	20	4	1	76	36	21	21
Tenn.	32	50	2	1	76	53	86	106
Ala.	20	30	3	-	30	31	16	55
Miss.	12	16	3	5	7	4	-	3
W.S. CENTRAL	159	271	16	9	1,355	372	98	880
Ark.	22	19	-	-	436	16	3	-
La.	24	66	1	2	7	6	-	7
Okla.	17	25	-	-	66	18	95	54
Tex.	96	161	15	7	846	332	-	819
MOUNTAIN	72	83	15	14	696	1,138	245	225
Mont.	2	4	-	1	5	30	16	31
Idaho	3	7	2	1	56	168	32	24
Wyo.	-	5	-	1	10	1	17	27
Colo.	21	31	2	3	281	251	56	-
N. Mex.	4	10	1	2	145	117	7	14
Ariz.	23	13	1	1	106	489	103	116
Utah	4	7	5	1	50	68	10	12
Nev.	15	6	4	4	43	14	4	1
PACIFIC	271	386	70	69	970	686	225	299
Wash.	51	55	-	1	353	125	-	-
Oreg.	37	49	N	N	165	45	5	3
Calif.	174	269	57	31	432	480	196	258
Alaska	3	2	-	1	4	6	24	38
Hawaii	6	11	13	36	16	30	-	-
Guam	-	-	-	-	-	-	-	-
P.R.	5	5	-	1	2	-	49	74
V.I.	-	-	-	-	-	-	-	-
Amer. Samoa	U	U	U	U	U	U	U	U
C.N.M.I.	-	U	-	U	1	U	-	U

N: Not notifiable. U: Unavailable. - : No reported cases.
* Incidence data for reporting year 2001 and 2002 are provisional and cumulative (year-to-date).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending September 28, 2002, and September 29, 2001 (39th Week)*

Reporting Area	Rocky Mountain Spotted Fever		Rubella				Salmonellosis	
			Rubella		Congenital Rubella			
	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001
UNITED STATES	719	448	8	19	2	-	28,464	29,471
NEW ENGLAND	3	3	-	-	-	-	1,630	1,919
Maine	-	-	-	-	-	-	110	148
N.H.	-	1	-	-	-	-	103	141
Vt.	-	-	-	-	-	-	62	64
Mass.	-	2	-	-	-	-	907	1,103
R.I.	3	-	-	-	-	-	123	107
Conn.	-	-	-	-	-	-	325	356
MID. ATLANTIC	36	26	1	8	-	-	3,417	3,902
Upstate N.Y.	7	2	1	1	-	-	1,156	890
N.Y. City	8	1	-	6	-	-	929	986
N.J.	9	6	-	1	-	-	497	956
Pa.	12	17	-	-	-	-	835	1,070
E.N. CENTRAL	14	15	1	2	-	-	3,950	3,921
Ohio	10	1	-	-	-	-	1,053	1,055
Ind.	2	1	-	-	-	-	345	406
Ill.	-	12	-	2	-	-	1,224	1,127
Mich.	2	1	1	-	-	-	686	678
Wis.	-	-	-	-	-	-	642	655
W.N. CENTRAL	86	60	-	3	-	-	1,879	1,726
Minn.	-	-	-	-	-	-	437	496
Iowa	3	2	-	1	-	-	333	260
Mo.	79	56	-	1	-	-	649	455
N. Dak.	-	-	-	-	-	-	25	43
S. Dak.	-	2	-	-	-	-	70	118
Nebr.	4	-	-	-	-	-	126	128
Kans.	-	-	-	1	-	-	239	226
S. ATLANTIC	375	221	-	4	-	-	7,712	6,748
Del.	4	7	-	-	-	-	67	81
Md.	43	36	-	1	-	-	734	627
D.C.	-	-	-	-	-	-	57	65
Va.	28	17	-	-	-	-	806	1,073
W. Va.	1	-	-	-	-	-	98	97
N.C.	226	121	-	-	-	-	1,042	980
S.C.	45	27	-	2	-	-	533	638
Ga.	18	9	-	-	-	-	1,409	1,282
Fla.	10	4	-	1	-	-	2,966	1,905
E.S. CENTRAL	83	90	-	-	1	-	2,170	2,006
Ky.	5	2	-	-	-	-	267	289
Tenn.	63	62	-	-	1	-	582	482
Ala.	15	13	-	-	-	-	600	547
Miss.	-	13	-	-	-	-	721	688
W.S. CENTRAL	103	23	2	-	-	-	2,189	3,736
Ark.	42	5	-	-	-	-	729	652
La.	-	2	-	-	-	-	265	657
Okla.	61	16	-	-	-	-	372	350
Tex.	-	-	2	-	-	-	823	2,077
MOUNTAIN	13	9	1	-	-	-	1,685	1,661
Mont.	2	1	-	-	-	-	75	60
Idaho	-	1	-	-	-	-	105	110
Wyo.	3	2	-	-	-	-	56	53
Colo.	2	1	-	-	-	-	464	457
N. Mex.	1	1	-	-	-	-	237	215
Ariz.	-	-	-	-	-	-	454	448
Utah	-	3	1	-	-	-	147	177
Nev.	5	-	-	-	-	-	147	141
PACIFIC	6	1	3	2	1	-	3,832	3,852
Wash.	-	-	-	-	-	-	373	400
Oreg.	2	1	-	-	-	-	275	220
Calif.	4	-	3	1	-	-	2,924	2,921
Alaska	-	-	-	-	-	-	45	32
Hawaii	-	-	-	1	1	-	215	279
Guam	-	-	-	-	-	-	-	19
P.R.	-	-	-	3	-	-	148	729
V.I.	-	-	-	-	-	-	-	-
Amer. Samoa	U	U	U	U	U	U	U	U
C.N.M.I.	-	U	-	U	-	U	25	U

N: Not notifiable. U: Unavailable. - : No reported cases.
* Incidence data for reporting year 2001 and 2002 are provisional and cumulative (year-to-date).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending September 28, 2002, and September 29, 2001 (39th Week)*

Reporting Area	Shigellosis		Streptococcal Disease, Invasive, Group A		*Streptococcus pneumoniae*, Drug Resistant, Invasive		*Streptococcus pneumoniae*, Invasive (<5 Years)	
	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001
UNITED STATES	12,284	13,978	3,225	2,870	1,682	2,096	176	318
NEW ENGLAND	249	245	152	185	17	99	2	34
Maine	4	6	20	10	-	-	-	-
N.H.	9	6	30	N	-	-	N	N
Vt.	1	7	9	11	4	7	1	-
Mass.	157	171	79	57	N	N	N	N
R.I.	12	17	14	11	13	4	1	3
Conn.	66	38	-	96	-	88	-	31
MID. ATLANTIC	869	1,158	523	522	90	137	50	82
Upstate N.Y.	216	397	245	217	79	131	50	82
N.Y. City	291	326	128	145	U	U	U	U
N.J.	198	231	103	105	N	N	N	N
Pa.	164	204	47	55	11	6	-	-
E.N. CENTRAL	1,292	3,372	571	662	170	144	76	88
Ohio	487	2,252	180	168	33	-	6	-
Ind.	71	168	42	53	132	144	45	43
Ill.	475	450	105	215	2	-	-	45
Mich.	136	248	244	175	3	-	N	N
Wis.	123	254	-	51	N	N	25	-
W.N. CENTRAL	792	1,322	196	294	161	115	37	48
Minn.	168	339	100	131	48	51	37	40
Iowa	100	327	-	-	N	N	N	N
Mo.	123	249	40	63	5	9	-	-
N. Dak.	15	20	-	11	1	5	-	8
S. Dak.	150	263	11	10	1	3	-	-
Nebr.	166	62	16	32	29	14	N	N
Kans.	70	62	29	47	77	33	N	N
S. ATLANTIC	4,662	1,910	665	485	1,053	1,128	4	5
Del.	144	12	2	2	3	5	N	N
Md.	874	121	107	N	N	N	N	N
D.C.	46	46	6	20	48	5	1	3
Va.	700	241	65	65	N	N	N	N
W. Va.	9	8	16	18	36	37	3	2
N.C.	278	283	107	124	N	N	U	U
S.C.	81	219	30	9	148	232	N	N
Ga.	1,202	271	143	153	259	329	N	N
Fla.	1,328	709	189	94	559	520	N	N
E.S. CENTRAL	984	1,220	87	91	114	200	-	-
Ky.	112	524	17	33	12	23	N	N
Tenn.	69	78	70	58	102	176	N	N
Ala.	524	182	-	-	-	1	N	N
Miss.	279	436	-	-	-	-	-	-
W.S. CENTRAL	929	2,194	105	259	40	236	3	61
Ark.	155	460	5	-	6	14	-	-
La.	125	183	-	1	34	222	1	61
Okla.	384	49	37	36	N	N	2	-
Tex.	265	1,502	63	222	N	N	-	-
MOUNTAIN	622	723	459	312	37	33	4	-
Mont.	3	4	-	-	-	-	-	-
Idaho	9	31	9	7	N	N	N	N
Wyo.	7	6	7	9	9	5	-	-
Colo.	136	185	115	127	-	-	-	-
N. Mex.	122	101	83	66	28	26	-	-
Ariz.	280	283	216	100	-	-	N	N
Utah	26	47	29	3	-	-	4	-
Nev.	39	66	-	-	-	2	-	-
PACIFIC	1,885	1,834	467	60	-	4	-	-
Wash.	117	152	65	-	-	-	N	N
Oreg.	83	84	N	N	N	N	N	N
Calif.	1,634	1,541	341	-	N	N	N	N
Alaska	5	6	-	-	-	-	N	N
Hawaii	46	51	61	60	-	4	-	-
Guam	-	37	-	1	-	-	-	-
P.R.	5	15	N	N	-	-	N	N
V.I.	-	-	-	-	-	-	-	-
Amer. Samoa	U	U	U	U	-	-	U	U
C.N.M.I.	17	U	-	U	-	-	-	U

N: Not notifiable. U: Unavailable. - : No reported cases.
* Incidence data for reporting year 2001 and 2002 are provisional and cumulative (year-to-date).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending September 28, 2002, and September 29, 2001 (39th Week)*

Reporting Area	Syphilis				Tuberculosis		Typhoid Fever	
	Primary & Secondary		Congenital					
	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001	Cum. 2002	Cum. 2001
UNITED STATES	4,601	4,427	232	382	8,622	10,229	192	268
NEW ENGLAND	105	43	-	3	269	345	13	12
Maine	2	-	-	-	10	15	-	1
N.H.	3	1	-	-	9	11	-	1
Vt.	1	2	-	-	-	4	-	-
Mass.	73	22	-	2	152	181	9	9
R.I.	6	8	-	-	25	47	-	-
Conn.	20	10	-	1	73	87	4	1
MID. ATLANTIC	506	385	41	58	1,564	1,705	46	91
Upstate N.Y.	24	15	5	4	223	261	8	15
N.Y. City	308	206	17	29	805	848	23	37
N.J.	100	96	18	25	364	378	12	33
Pa.	74	68	1	-	172	218	3	6
E.N. CENTRAL	792	774	33	54	896	1,038	16	30
Ohio	111	65	1	2	145	201	6	3
Ind.	50	122	-	8	83	74	2	2
Ill.	231	260	25	35	439	485	1	16
Mich.	381	307	7	5	188	221	3	5
Wis.	19	20	-	4	41	57	4	4
W.N. CENTRAL	79	75	-	9	402	402	8	12
Minn.	37	29	-	2	163	166	3	6
Iowa	2	4	-	-	24	34	-	-
Mo.	22	18	-	5	105	97	1	6
N. Dak.	-	-	-	-	1	3	-	-
S. Dak.	-	-	-	-	9	10	-	-
Nebr.	3	5	-	-	20	29	4	-
Kans.	15	19	-	2	80	63	-	-
S. ATLANTIC	1,210	1,535	57	95	1,717	1,914	31	34
Del.	10	11	-	-	13	15	-	-
Md.	145	196	11	3	211	164	7	9
D.C.	44	28	1	2	-	51	-	-
Va.	48	81	1	4	134	186	1	9
W. Va.	2	-	-	-	26	24	-	-
N.C.	219	349	17	11	244	251	1	2
S.C.	92	192	5	20	136	131	-	-
Ga.	252	293	8	20	302	344	8	9
Fla.	398	385	14	35	651	748	14	5
E.S. CENTRAL	361	472	12	24	545	632	4	1
Ky.	73	35	3	-	101	95	4	-
Tenn.	133	248	3	14	218	237	-	1
Ala.	121	92	4	4	151	200	-	-
Miss.	34	97	2	6	75	100	-	-
W.S. CENTRAL	632	538	51	65	1,187	1,565	4	15
Ark.	25	30	1	6	98	115	-	-
La.	117	124	-	-	-	100	-	-
Okla.	51	47	2	5	101	112	-	-
Tex.	439	337	48	54	988	1,238	4	15
MOUNTAIN	216	168	12	24	261	411	10	8
Mont.	-	-	-	-	6	6	-	1
Idaho	1	1	-	-	9	7	-	-
Wyo.	-	1	-	-	2	3	-	-
Colo.	33	20	1	1	40	100	5	1
N. Mex.	23	15	-	2	21	44	1	-
Ariz.	147	117	11	21	149	158	-	1
Utah	6	8	-	-	21	29	2	1
Nev.	6	6	-	-	13	64	2	4
PACIFIC	700	437	26	50	1,781	2,217	60	65
Wash.	44	37	1	-	177	182	4	4
Oreg.	12	13	1	-	83	82	2	6
Calif.	637	376	23	50	1,367	1,809	51	52
Alaska	-	-	-	-	40	39	-	1
Hawaii	7	11	1	-	114	105	3	2
Guam	-	4	-	1	-	47	-	2
P.R.	178	203	12	9	33	95	-	-
V.I.	1	-	-	-	-	-	-	-
Amer. Samoa	U	U	U	U	U	U	U	U
C.N.M.I.	15	U	-	U	32	U	-	U

N: Not notifiable. U: Unavailable. - : No reported cases.
* Incidence data for reporting year 2001 and 2002 are provisional and cumulative (year-to-date).

TABLE III. Deaths in 122 U.S. cities,* week ending September 28, 2002 (39th Week)

Reporting Area	All Causes, By Age (Years)						P&I† Total
	All Ages	≥65	45-64	25-44	1-24	<1	
NEW ENGLAND	286	208	43	25	4	6	27
Boston, Mass.	U	U	U	U	U	U	U
Bridgeport, Conn.	33	22	7	3	1	-	-
Cambridge, Mass.	24	18	4	2	-	-	2
Fall River, Mass.	28	23	4	1	-	-	3
Hartford, Conn.	U	U	U	U	U	U	U
Lowell, Mass.	19	14	1	2	1	1	3
Lynn, Mass.	U	U	U	U	U	U	U
New Bedford, Mass.	36	31	3	2	-	-	1
New Haven, Conn.	39	27	5	5	-	2	6
Providence, R.I.	U	U	U	U	U	U	U
Somerville, Mass.	4	3	1	-	-	-	3
Springfield, Mass.	41	21	11	6	1	2	1
Waterbury, Conn.	26	20	3	2	-	1	-
Worcester, Mass.	36	29	4	2	1	-	8
MID. ATLANTIC	1,954	1,397	367	132	30	28	107
Albany, N.Y.	45	36	8	-	-	1	3
Allentown, Pa.	14	12	2	-	-	-	1
Buffalo, N.Y.	102	69	19	10	2	2	10
Camden, N.J.	26	13	9	2	-	2	-
Elizabeth, N.J.	U	U	U	U	U	U	U
Erie, Pa.	29	22	4	1	-	2	2
Jersey City, N.J.	41	31	4	5	1	-	-
New York City, N.Y.	1,051	748	208	72	12	11	41
Newark, N.J.	57	22	18	12	4	1	6
Paterson, N.J.	20	12	4	2	2	-	1
Philadelphia, Pa.	206	151	36	10	4	5	11
Pittsburgh, Pa.§	29	23	4	1	1	-	1
Reading, Pa.	19	15	2	2	-	-	3
Rochester, N.Y.	115	86	19	9	-	1	12
Schenectady, N.Y.	22	18	1	1	2	-	3
Scranton, Pa.	23	17	5	1	-	-	1
Syracuse, N.Y.	99	77	15	4	1	2	10
Trenton, N.J.	31	27	3	-	-	1	2
Utica, N.Y.	25	18	6	-	1	-	-
Yonkers, N.Y.	U	U	U	U	U	U	U
E.N. CENTRAL	1,515	1,035	316	93	40	31	104
Akron, Ohio	48	39	7	2	-	-	6
Canton, Ohio	39	30	8	-	-	1	3
Chicago, Ill.	U	U	U	U	U	U	U
Cincinnati, Ohio	92	64	13	9	2	4	11
Cleveland, Ohio	121	77	26	11	3	4	8
Columbus, Ohio	141	97	30	8	4	2	10
Dayton, Ohio	105	74	21	4	3	3	4
Detroit, Mich.	172	93	47	23	4	5	15
Evansville, Ind.	42	29	10	3	-	-	2
Fort Wayne, Ind.	73	55	11	4	2	1	3
Gary, Ind.	11	4	3	3	-	1	-
Grand Rapids, Mich.	57	43	8	1	2	3	8
Indianapolis, Ind.	173	103	50	11	6	3	9
Lansing, Mich.	36	26	6	1	2	1	2
Milwaukee, Wis.	101	77	19	3	1	1	13
Peoria, Ill.	49	34	15	-	-	-	2
Rockford, Ill.	55	37	11	2	4	1	4
South Bend, Ind.	57	46	8	3	-	-	1
Toledo, Ohio	88	67	13	4	3	1	3
Youngstown, Ohio	55	40	10	1	4	-	-
W.N. CENTRAL	515	337	114	38	14	12	29
Des Moines, Iowa	74	54	13	4	2	1	8
Duluth, Minn.	18	12	5	1	-	-	1
Kansas City, Kans.	20	9	8	2	1	-	1
Kansas City, Mo.	78	49	17	11	1	-	3
Lincoln, Nebr.	28	16	10	-	2	-	2
Minneapolis, Minn.	67	49	12	4	2	-	1
Omaha, Nebr.	96	61	17	7	2	9	7
St. Louis, Mo.	U	U	U	U	U	U	U
St. Paul, Minn.	45	28	14	2	1	-	1
Wichita, Kans.	89	59	18	7	3	2	5
S. ATLANTIC	785	471	183	78	30	23	41
Atlanta, Ga.	U	U	U	U	U	U	U
Baltimore, Md.	175	110	35	21	8	1	15
Charlotte, N.C.	123	86	25	7	3	2	13
Jacksonville, Fla.	U	U	U	U	U	U	U
Miami, Fla.	95	66	22	6	-	1	6
Norfolk, Va.	46	26	10	1	4	5	1
Richmond, Va.	60	30	17	9	3	1	4
Savannah, Ga.	51	35	8	6	-	2	-
St. Petersburg, Fla.	U	U	U	U	U	U	U
Tampa, Fla.	U	U	U	U	U	U	U
Washington, D.C.	211	105	55	28	12	11	2
Wilmington, Del.	24	13	11	-	-	-	-
E.S. CENTRAL	788	522	166	58	25	17	57
Birmingham, Ala.	162	119	28	8	5	2	16
Chattanooga, Tenn.	93	65	22	4	-	2	6
Knoxville, Tenn.	63	45	12	4	1	1	4
Lexington, Ky.	67	45	16	2	3	1	4
Memphis, Tenn.	176	110	34	19	7	6	11
Mobile, Ala.	43	26	9	4	4	-	2
Montgomery, Ala.	46	25	13	7	1	-	3
Nashville, Tenn.	138	87	32	10	4	5	11
W.S. CENTRAL	1,393	851	297	125	73	47	73
Austin, Tex.	80	53	19	5	2	1	3
Baton Rouge, La.	62	44	12	4	2	-	4
Corpus Christi, Tex.	51	34	9	5	1	2	2
Dallas, Tex.	181	111	40	12	7	11	10
El Paso, Tex.	48	27	15	2	3	1	1
Ft. Worth, Tex.	125	72	35	9	-	9	4
Houston, Tex.	298	144	67	35	37	15	18
Little Rock, Ark.	60	35	14	7	3	1	-
New Orleans, La.	40	25	6	5	4	-	-
San Antonio, Tex.	237	163	40	23	6	5	15
Shreveport, La.	81	51	17	6	5	2	9
Tulsa, Okla.	130	92	23	12	3	-	7
MOUNTAIN	833	559	163	62	20	29	55
Albuquerque, N.M.	65	47	8	7	2	1	8
Boise, Idaho	37	32	3	-	-	2	2
Colo. Springs, Colo.	69	48	11	4	3	3	1
Denver, Colo.	107	66	19	13	2	7	5
Las Vegas, Nev.	245	151	58	20	6	10	13
Ogden, Utah	27	21	5	-	1	-	1
Phoenix, Ariz.	U	U	U	U	U	U	U
Pueblo, Colo.	28	17	9	1	1	-	2
Salt Lake City, Utah	113	75	24	9	1	4	13
Tucson, Ariz.	142	102	26	8	4	2	10
PACIFIC	1,652	1,109	337	127	41	34	91
Berkeley, Calif.	14	8	4	-	1	1	-
Fresno, Calif.	70	50	12	6	1	1	9
Glendale, Calif.	22	20	2	-	-	-	-
Honolulu, Hawaii	72	51	13	4	-	4	1
Long Beach, Calif.	52	36	11	2	-	3	11
Los Angeles, Calif.	398	264	83	32	12	7	-
Pasadena, Calif.	23	14	6	1	1	1	4
Portland, Oreg.	183	113	39	27	3	1	4
Sacramento, Calif.	162	108	35	8	5	6	13
San Diego, Calif.	160	111	33	12	2	2	15
San Francisco, Calif.	U	U	U	U	U	U	U
San Jose, Calif.	184	130	30	12	9	3	20
Santa Cruz, Calif.	24	16	3	3	2	-	3
Seattle, Wash.	98	56	28	7	4	3	2
Spokane, Wash.	64	41	20	2	-	1	4
Tacoma, Wash.	126	91	18	11	1	1	5
TOTAL	9,721¶	6,489	1,986	738	277	227	584

U: Unavailable. -:No reported cases.

* Mortality data in this table are voluntarily reported from 122 cities in the United States, most of which have populations of ≥100,000. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

† Pneumonia and influenza.

§ Because of changes in reporting methods in this Pennsylvania city, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

¶ Total includes unknown ages.

(*Continued from page 884*)

of blood transfusion and organ transplantation. During August 28–October 2, CDC received reports from 10 states of 15 patients with confirmed West Nile meningoencephalitis (WNME) or meningitis diagnosed after receiving blood components within 1 month of illness onset. CDC has been notified of additional cases among transfusion recipients, but demographic and clinical information is pending. All 15 of these patients resided in areas with high levels of WNV activity. Investigations are ongoing to determine whether transfusion was the source of WNV transmission.

Of the 15 cases, eight (53%) were reported since September 25. One patient, an organ donor from Georgia, was positive for WNV at the time of organ recovery following receipt of multiple blood transfusions (*1*). The onset of symptoms for the remaining 14 patients began in July (two patients), August (five patients), and September (seven patients). The reasons for hospitalization included a surgical procedure or obstetric delivery (four patients) and solid organ transplantation (three patients who received an organ from different donors who did not have evidence of WNV infection at the time the organs were recovered). Five patients had hematologic conditions, three patients had myelodysplasia, and two patients had acute myelogenous leukemia. These 15 patients received blood components from a median of 18 donors (range: 2–185 donors). WNME was the probable cause of death for at least three of the four patients who died.

Some of these investigations provide evidence that WNV can be transmitted through blood transfusion. Two patients tested positive for WNV infection after receiving different blood products derived from a single blood donation subsequently found to have evidence of WNV (*2*). In another case, WNV was isolated from a unit of frozen plasma that had been withdrawn as a result of the investigation, indicating that the virus can survive in some blood components (*1*). In addition to these patients, investigations in Georgia and Florida have demonstrated transmission of WNV in four recipients of solid organs from a single donor (*1,3,4*).

Patients with WNV infection who have received blood transfusions or organs within the 4 weeks preceding the onset of symptom should be reported to CDC through local public health authorities. Serum or tissue samples should be retained for later studies. In addition, the Public Health Service is expanding an earlier recommendation (*1*) to request that cases of WNV infection in patients who had onset of symptoms within 2 weeks of blood or organ donation be reported. Prompt reporting of these cases will facilitate withdrawal of potentially infected blood components.

Additional information about WNV activity is available from CDC at http://www.cdc.gov/ncidod/dvbid/westnile/index.htm and http://www.cindi.usgs.gov/hazard/event/west_nile/west_nile.html.

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